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ABSTRACT

There is little empirical research existing in the areas of natural disasters' effects on children's mental health. Therefore, the purpose of this study was twofold. First, it examined the effectiveness of the Oklahoma State University Posttraumatic Stress Disorder (OSU-PTSD) Screening Scale after two different types of natural disasters. The participants of this study were children who have been exposed to tornado and earthquake. Secondly, the study compared the single-short term disaster with multiple-prolonged disaster in terms of their effects on children's PTSD reactions in Turkey and the United States. (Author)

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The Effectiveness of OSU-PTSD Screening Survey In Natural Disasters

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Abstract

There is little empirical research exists in the area of natural disasters' effects on children mental health. Therefore, the purpose of this study was twofold. First, it examined the effectiveness of OSU-PTSD Screening Scale after two different types of natural disasters. The participants of this study were children who have been exposed to tornado and earthquake. Secondly, the study compared the single-short term disaster with multiple-prolonged disaster in terms of their effects on children PTSD reactions in Turkey and U.S.A.

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The Effectiveness of OSU-PTSD Screening Survey

In Natural Disasters

Statement of Problem

We are living in an extremely dynamic world, a world that is rapidly changing in every moment and aspect. Children are subject to different kinds of traumatic experiences and stressful life events. Growing awareness and public attention have been drawn to the fact that children can be significantly affected by traumatic incidents and natural disasters. The Task Force Report (Vogel & Vernberg, 1993) described a natural disaster as an event that is highly sudden, highly disruptive, limited in time, and public. It is a very well known fact that disasters often result in destruction of property, major economic losses for affected communities, serious injuries, and loss of friends or family members. The psychological sequela of natural disasters is also quite significant (Delamater & Applegate, 2000).

On May 3,1999 an F-6 tornado struck the towns of Mulhall and Orlando, OK. The tornado caused major destruction in business, school and community buildings. Similarly, Turkey has experienced one of the most destructive earthquakes in the history of the world on August 17, 1999 and again on November 12, 1999. A 7.4 Richter scale magnitude earthquake struck Turkey and left behind 20,000 deaths and 500,000 homeless. These major disasters also caused destruction in infrastructure, schools and businesses. Therefore, as a result of earthquakes many residents had to relocate and many moved out from their cities.

In those situations, mental health experts encounter a large number of affected student population. Therefore, one of the purposes of this research was to create a time- and money-efficient, brief, and easily administrable and rated screening survey. There are other PTSD instruments in this area; however, they lack the combination of social, cognitive, emotional,

behavioral and school aspects of traumatic experience. Thus, the OSU PTSD research team has attempted to create a practical instrument in order to conduct a multidimensional screening in a short time, with a large numbers of children exposed to natural disasters. The second focus of this study was to compare children who have experienced tornado and earthquake disasters in two different countries, the United States and Turkey, to determine if the instrument can be used for different types of natural disasters and different cultural contexts.

Participants

Approximately 84 elementary and middle school children volunteered for the study from Mulhall and Orlando schools in Oklahoma. The group consisted of 38 boys and 46 girls in 4^{th}, 5^{th} and 6^{th} grades. The age mean was 10.44 years old. In the same way, 200 Turkish children were solicited from the city of Adapazari, Turkey. The Turkish group consisted of 98 boy and 102 girl student in 4th and 5^{th} grad. The age mean was 10.78. Overall, the Tornado and Earthquake group were very similar in terms of age, gender, social strata and other variables.

Instrument

The Oklahoma State University PTSD research team reviewed all the previous PTSD instruments and developed a new comprehensive 10-item likert-type PTSD scale covering the major symptoms of PTSD. This instrument is designed, as a part of larger project, to be a supplementary material with another PTSD survey package. It includes 10 items covering different aspects of traumatic experience. Psychometric properties are not established; however, data analysis is still on progress.

Procedure

The research team visited these schools and screened the children in the 11th month after the disaster. One of the researchers, a native of Turkey, administered the same the same scale in Turkey for 11, months after the earthquake.

Results

		Tornado Groups				Earthquake Groups			
	Items	Never Experienced		Somewhat Experienced		Never Experienced		Somewhat Experienced	
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
1	have been in	13	19	55	81	24	14	144	86
2	think about	40	58	29	42	45	23	153	77
3	avoidance	54	78	15	22	75	38	122	62
4	happy	45	65	24	35	51	25	146	75
5	feel different	56	81	13	19	88	44	110	56
6	future	55	80	13	20	71	36	127	64
7	sleeping	47	69	21	31	62	31	135	69
8	get upset	49	71	20	29	60	30	140	70
9	concentration	55	80	14	20	57	29	143	71
10	school work	51	74	18	6	75	38	125	63

Children reported similar responses only in the first item. The item that asked if the children were in a tornado revealed that 81 % said yes they have remembered being in tornado and 13 % of children in the tornado group said they had not been in a tornado. They were not sure about their experiences unless their house and property were damaged. In the Turkish group 86 % said yes they lived through the earthquake, and only 14 % answered no. Similar patterns were observed in the Turkish group as well. It seemed that children did not considered themselves as disaster victims unless their house were damaged or they had experienced personal injuries.

For the actual PTSD items, the earthquake group endorsed symptoms at a rate two to three times that of the tornado group.

Conclusions

Results revealed that the short form of the OSU-PTSD survey was a very useful and time-efficient instrument in trauma assessment that found different ratings for these two countries. As it was mentioned in previous studies children's strong resilience and habituation to traumatic (Bodman, 1941) experience was not observed in Turkish children.

One possible explanation for the difference is that the earthquake had a greater and more enduring effect than the tornado. Earthquakes caused more disruption in business and community activities. There were also more incidents of unemployment, relocation and separation from their house and family. These are described as "secondary stressor " by (Golec, 1983; Lima et al. 1987). Given the constant multiple and prolonged effect of the earthquakes, the results are as expected.

This finding was consistent with previous research (Garrison et al.1993) that some types of natural disasters are more likely to evoke symptoms representative of PTSD than others. Different disasters may affect children differently depending on type of disruption, intensity, proximity and duration of trauma experience (Steinglass & Gerrity, 1990). Future research is needed to see if the PTSD symtomology is directly emerged from type of disaster itself or it is secondary to the post-disaster adversarial.

The difference may also be explained by cross-cultural differences in children and families coping with such stressful situations. Turkish earthquake survivors received substantial familial and social support although they still demonstrated high level of traumatization.

Therefore, maybe social support was not enough for them to fully recover. They might have needed more organized institutional support in the long term.

These results indicate that the OSU-PTSD screener is a useful tool for surveying large groups of children who are impacted by natural disasters. They also indicate that children continue to experience PTSD symptomology one year post-trauma and to a greater degree in areas with greater secondary trauma.

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